

Commonly Used qsub Command Options

The qsub options can be read from the PBS directives of a PBS job script or from the qsub command line. For a complete list of available options, see **man qsub**. Commonly used options include:

- S *shell_name*
Specifies the shell that interprets the job script.
- V
Declares that all environment variables in the qsub command's environment are to be exported to the batch job.
- v *variable_list*
Lists environment variables to be exported to the job.
- q *queue_name*
Defines the destination of the job. On Pleiades, queue names include normal, debug, long, and low. Endeavour queue names include e-normal, e-long, and e-debug. In addition, there is a devel queue on Pleiades for development work. See [Pleiades Job Queue Structure](#).
- l *resource_list*
Specifies the resources that are required by the job and establishes a limit to the amount of resources that can be consumed. Commonly specified resources include select, ncpus, walltime, and mem (memory). You can also specify filesystems. See **man pbs_resources** for a complete list.
- e *path*
Directs the standard error output produced by the request to the stated file path.
- o *path*
Directs the standard output produced by the request to the stated file path.
- j *join*
Declares that the standard output and error streams of the job should be merged (joined). Possible values for *join* are:
 - oe - Standard output and error streams are merged in the standard output file.
 - eo - Standard error and output streams are merged in the standard error file.
- k *keep*
Declares that the standard output and error streams of the job should be retained on the (first) execution host. This is not typically useful on NAS systems; however, when the d (direct) option is included, it changes the way the standard output and error files from a job are handled. Usually, these files are collected until the job ends and only then copied back to their destination files. With -kod, the job writes directly to its output file as it is running. Similarly, with -ked, the error file is written directly. You can then view those files from a front-end host to monitor how the job is running.

There are a few caveats to this feature. First, the output or error files must be available to the nodes where the job runs (the files should be on /homeX or /nobackup filesystems, not on a local filesystem such as /tmp). Second, if the files already exist, they will be appended to, rather than overwritten, as would be the case without -k. If multiple jobs specify the same output file, the outputs from the jobs can be intermingled in the final file. Third, there can be a delay of a few seconds between the time the job writes to the files and the time the change is visible on the front-end host.
- m *mail_options*
Defines the set of conditions under which the execution server will send mail message about the job. See **man qsub** for a list of mail options.
- N *name*
Declares a name for the job.
- W *addl_attributes*
Allows for the specification of additional job attributes. The most common additional attributes are:
 - W group_list=*g_list* - Specifies the group the job runs under.
 - W depend=afterany:*job_id.server_name.nas.nasa.gov* - Submits a job that is to be executed after *job_id* has finished with any exit status (for example, 12345.pbspl1.nas.nasa.gov).
 - W depend=afterok:*job_id.server_name.nas.nasa.gov* - Submits a job that is to be executed after *job_id* has finished with no errors.
- r *y|n*
Declares whether the job is re-runnable. See [Checkpointing and Restart](#).

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